DESCRIPTIONS OF NEW NEOTROPICAL TABANIDAE MOSTLY IN THE CALIFORNIA ACADEMY OF SCIENCES

(Diptera)

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This report contains discussion and descriptions of Tabanidae mostly from the West Coast of South America, in part based on collections made by Drs. E. S. Ross and A. E. Michelbacher in 1950 to whom the writer is indebted for privilege of studying their material. All types described below are in the California Academy of Sciences (CAS), San Francisco. Study of pertinent types in European museums by the writer in 1953, on a travel grant from the American Philosophical Society, facilitated the present report. BMNH is the abbreviation used for British Museum (Natural History).

Mycteromyia philippii Philip, new species

Philippi (1865) misidentified the only species, *Pangonia conica* Bigot which he mentions in the characterizing of his genus *Mycteromyia,* though he adds and describes three new species under the genus, namely, *fusca, brevirostris,* and *murina. M. fusca,* "9 lin." (about 18 mm.) is undoubtedly the true larger *M. conica* with reddish legs and bases of the antennae, and isolated triangles not forming a pale-haired line on the abdomen. A pair of each sex compared with the type female of *M. conica* in BMNH was dissected by Mackerras (1955) who calls attention to the remarkable genitalia in this genus; he was mistaken, however, in stating that *Mycteromyia* was "originally monotypic for *Pangonia conica* Bigot."

Specimens in CAS agreeing with *M. "conica"* Philippi not Bigot appear to be a direct, unnamed species.

Holotype female, 13 mm. Eyes bare. Front grayish pollinose with coarse, sparse black hairs, sides subparallel, about equal in height and breadth, three plain ocelli not on a raised prominence at the vertex. Subcallus and frontoclypeus gray pollinose, the latter with two lateral brown bands and produced about equal to the height of the front. Antennae, palpi and proboscis entirely black, the palpi longer than the antennae, and the proboscis nearly as long as the abdomen. Cheeks and posterior head whitish pollinose and pilose, including beard. *Thorax* prominently striped with four

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dark brown stripes on a gray ground, the sublateral stripes broken at the humeral sutures; covered with sparse brown and gray hairs. Scutellum black with grayish tinges laterally and margined with white hairs. Pleura gray with mostly pale hairs. Coxae and femora dark brown, predominantly black haired. Tibiae and tarsi dark reddish with black hairs but no hind-tibial fringe. Wings subhyaline, the crosslveins ("nervis transversis") with faint clouds but the longitudinal veins not margined with brown as in *M. conica*, cell R_5 closed and long petiolate, spur-veins as long as stems. Subepaulets bare. Halteres dark brown. *Abdomen* dark brown, velvety black underneath, and with coarse black hairs extending around onto the sides of tergites 3 to 7. Coarse white hairs on tergites 1 and 2 except on extreme margins, and in a narrow, continuous median line to the tip of the abdomen.

Holotype locality: "CHILE, E. P. Reed Collection."

Allotype male, 13 mm. Eyes dichoptic. Like the ♀ and readily associated but differs in following respects:

Front narrower (index, 1:1.67), snout a little shorter than front, and proboscis a little longer than the abdomen. Pale hairs of beard and body pale yellowish, confined on the first two tergites to the hind margins, the median line expanding on each incisure. Tergite eight swollen and bulbous with mixed black and pale hairs.

Allotype locality: "Las Trancas, 10–8–39, Chile, E. P. Reed Collection."

Paratype females, 1, "Q. Seca, El Panque, 29–8–37, Chile, E. P. Reed Collection"; 1, "El Sauce, Elqui, 5–XI–37, Chile, E. P. Reed Collection" (In Coll. C.B.P.); "Hda. Illapel, Coquimbo, Chile, 24–25 Oct., 1954. Luis E. Penna" (In Coll. L. L. Pechuman). Agree with the holotype but the pale hairs on the dorsum of the abdomen considerably worn in two, revealing the first two tergites as with gray integument, and two submedian dark dashes on the second.

M. bejaranoi Barr. and Duret from Neuquen, Argentina, has some similar features but lacks the black venter, there are pale middorsal triangles rather than a longitudinal line, and the tibiae are reddish-yellow haired.

From the description of hairy body but bare eyes, and long proboscis, *Pangonia obscuripennis* Philippi also suggests a species of *Mycteromyia,* but the closed first posterior cell is not mentioned. This species probably has some resemblance to the following, *M. asper,* new species, but the red of the former is confined to the sides of tergites 2 and 3, the first segment is gray, the beard is yellowish, the wing veins are brown margined, and it is a larger insect with apparently longer proboscis.

Mycteromyia asper* Philip, new species

A rather small, dark species with red-sided abdomen, spotted wings, bicolored legs, and an especially shaggy, black-haired crest on the front and with long, white-haired beard.

Holotype female, 10.5 mm. Eyes bare. Front very wide, divergent above, basal width greater than height as 1:0.8, buff-gray pollinose with a large median patch of sooty pollen in the middle, at the top of which (and just ahead of the vertex) is located a low ocellar tubercle with three ocelli. Snout ash-gray pollinose, unusually short, forming a transverse ridge beneath the antennae. The latter short and slender, entirely black, the scape unusually short, expanded in the distal half to equal the pedicel and basal annulus in thickness as well as the last in length; scape hardly twice the length of the beadlike pedicel, both with coarse black hairs; flagellum a little more than twice the length of the two basal segments combined, the apical annulus but little longer than the adjoining one. Palpi black with concolorous hairs, longest on the basal segment, the two segments about equal in length, the apical segment more slender and tapering, not clavate. Proboscis a little longer than the thorax. Vestiture of entire head especially long and shaggy, a heavy black patch on the front, the beard creamy white with scattering black hairs around the lower ocular margins, and sparse black and yellow ones on the snout. *Thorax,* including the antealar tubercles and scutellum, black with five narrow gray lines and with similar diagonal connections laterally at the sutures in front of the wing bases. Vestiture sparse black and yellow dorsally, denser buff below with a median patch of dark hairs on the pleura. Coxae and femora black, the former with bushy pale hairs grading into black and some yellow on the femora. Tibiae reddish, the fore and hind pair darkened apically, covered with short brown hairs: no hind-tibial fringe. Wings tinted with prominent clouds on the cross-veins, cell R_5 closed and petiolate, spur-veins present. Knobs of halteres bright yellow. Subepaulets bare. Sides of abdomen and entire venter brick red; tergite 1 dull black with outer margins red, brighter black geminate spots on tergites 2 to 4 enclose flat, pale yellow triangles tallest on 4 which nearly bisects the black. Vestiture shaggy and black; pale yellow hairs predominate on tergite 1, and on the triangles and outer corners of the following tergites. Hairs of venter predominantly pale yellow anteriorly but blackish caudad.

Holotype locality: "Fray Jorge Forest, Coquimbo, Chile. 11 December, 1950, Ross and Michelbacher."

The red-sided abdomen is distinctive from all other species including *M. brevirostris* Philippi which is a more uniformly brownish insect with brown basal antennal segments and scutellum, and pale brown legs. The proboscis is reported as not as long as the thorax. Kröber (1930b) adds the following characters which differ from *M. asper*: Front almost quadrilateral with yellowish

* Latin, rough, in reference to the shagginess, particularly of the head.

hair; basal annulus of flagellum enlarged; snout a little longer than the front; white hairs on the hind border of the scutellum and parts of the abdomen; and halteres brown.

Mycteromyia eriodes* Philip, new species

A medium-sized, grayish, hoary species resembling a woolly bombyliid with spotted wings, elongate proboscis nearly as long as the body, and bulbous genitalia.

Holotype male, 14 mm. Eyes bare, widely dichoptic. Front gray pollinose with sparse yellow bristles below, brown at vertex, sides subparallel; 1.4 times higher than basal width between the inner corners of the eyes; vertex depressed below upper eye level; ocellar tubercle set well below vertex, with three plain ocelli; no calli. Subcallus pearly gray pollinose, bare in middle, a few short yellow hairs laterally. Snout from base of antennae, equal in length to height of front, brown with sparse gray pollen except on a faint brown line on each side, and with very few pale hairs. Scape cylindrical, dark brown, twice the length of the pedicel; flagellum black with eight annuli, the basal one a little longer than thick, the apical one elongated over twice the length of the preceding. Palpi brown with pale hairs, the apical segment clavate and about three and one-half times longer than median thickness and a little longer than the slender labellae. Proboscis black. Beard dense and white. *Thorax* above and below and scutellum covered with dense, long white pile, the notum with four prominent bare brown lines. Coxae brown, remainder of legs reddish yellow, with long white hairs basally, short brown hairs on the tibiae, no hind-tibial fringe. Wings slightly tinted with prominent clouds on the cross-veins, the veins dark brown apically, reddish basally, cell R_5 closed and petiolate, spur-veins present. Halteres pale reddish; subepaulets bare. *Abdomen* compact and wide, rapidly constricted to the sixth segment, the brownish gray integument obscured by heavy white pile with especially dense fringes on the incisures, the eighth tergite pale reddish, swollen and bulbous with coarse yellow hairs, sparser dorsally. Venter contrasting chocolate brown with concolorous hairs.

Holotype locality: "CHILE, OLMUE, October 23, 1917." "E. P. Reed Collection." Labelled "*Mycteromyia conica* Bigot det. Reed."

Paratype males: 1, same data (in Coll. C.B.P.); 1, same locality but "18 October, 1917"; 1, Valparaiso, 15 November, 1922, E. P. Reed Coll. (CAS).

The unusual woolliness due to long white pile over the whole body is distinctive. Compared to the type male of *M. cinerascens* (Bigot) (thought to be a female by Bigot) and another male from Valparaiso Province, this is much paler and more hirsute. *M. cinerascens* (specimen from Valparaiso agreeing with type in

* From Greek, woolly.

BMNH) has sparser and shorter, yellow hair on notum and abdomen, the venter is not contrasting brown, and the palpi are longer and darker. Though Kröber must have seen the type of *cinerascens* in the British Museum, it is apparent that most of his remarks really refer to *eriodes*.

MYCTEROMYIA HIRTIPALPIS (Bigot)

Syn. *M. edwardsi* Kröber. The types were compared by Fairchild and the writer in the British Museum. The eyes are bare and Kröber (1930a) was mistaken in erecting a new genus, *Caenopangonia*, for *hirtipalpis* on hairy eyes. Except for the proboscis described as long as thorax and abdomen together, *M. murina* Philippi also agrees and would be the earliest name. Possibly the proboscis was unusually extended. *Silvestriellus patagonicus* Brèthes from Santa Cruz (? Argentina) may also be this species but the description is inadequate to decide.

A series of five specimens in CAS and Pechuman Collections from various localities in Chile suggests either considerable variation in amount and distribution of pale hairs, especially underneath, or that there is a closely knit, composite group here. In one the hairs of the thorax and basal abdomen are rust red rather than straw yellow, in another, they are almost entirely blackish. The question cannot be settled with the material at hand. The proboscis is a little shorter than the abdomen in all. *M. philippii* Philip is at once distinguished from this group by its longer snout, proboscis and palpi.

In view of the new species described from Argentina by Barretto and Duret (1954) and those above, it is unfortunate that the existence of Philippi's types are unknown. The type, said to be in Vienna, of *M. robusta* Kröber from country unknown, was not found during a visit by the writer in 1953. Like *M. asper* Philip, it has a reddish sided abdomen, but is a much larger species with front divergent below.

The specimens from Chile in Vienna identified by Kröber (1930) as *M. fusca* and *M. brevirostris* were studied. The former has sides of abdomen more orange yellow than olive brown and could not be *M. philippii* (nor *M. fusca* Philippi = *M. conica* Bigot). I cannot place this specimen but it may relate to *M. bejaranoi* Barrett and Duret from Neuquen. It is possible that the two females under *M. brevirostris* with nearly denuded, almost orange yellow abdomens are correctly placed by their concolorous

scutellums and legs and short proboscides. In these, the frontoclypeus (snout) is hardly produced so that the scape extends beyond the oral margin viewed from the side. The comparative extent to which the frontoclypeus is produced will be an important morphological criterion in members of this genus, among which there appears to have been an almost precinctive, evolutionary burst of extraordinary specialization in southern South America.

MESOMYIA (VEPRIUS) RUBRICORNIS (Kröber), new combination

The male only was originally described. Ross and Michelbacher took a female "18 km. east of San Carlos, Nuble, Chile, 24–XII–50" which may be designated the allotype. The bright red, disc-like antennal plate serves to associate this otherwise entirely black insect with the male, and also to distinguish it from *M. carbo* (Macquart) (syn. *presbiter* Rondani). The two species otherwise resemble one another so closely it would be exceedingly difficult to assign specimens with broken antennae. The present allotype female, 12 mm., has the frontal keel only slightly expanded below, whereas, two *carbo* have the keel clavate over half the width of the fronts, but this may be only individual variation. The plates are even more disclike in shape in the allotype than in *carbo*. A considerable amount of plant pollen adherent to the body of the allotype indicates flower visitation.

A male each is at hand from Penco and Angol, Chile, with antennae intact. Mackerras (1955) has shown the correct generic assignment of the group.

SCAPTIODES GAGATINA (Philippi), new combination

This is a small, shining black species with clear wings that appears to be not uncommon in some parts of Chile. A series was taken by Ross and Michelbacher "west of Angol, Crest of Sierra Nahuelbuta, 1200 meters, 3 January, 1951." Kröber (1934) assigned the species unnaturally to *Dasyommia* because of the ocellar tubercle and hairy eyes. *Scaptoides nigerrima* Enderlein, a probable synonym, was placed in Tribe Lepiselaginae because of the lack of tooth on the antennal plate, a character which combined with the bare subepaulets justifies Mackerras (1954) in placing the species closer to *Dasybasis* and *Stenotabanus* in the Diachlorini.

The type of *S. nigerrima* was studied on loan from Berlin Museum through courtesy of Professor Fritz Peus, and is somewhat soiled preventing synonymy here with certainty, but struc-

tural characters appear in good agreement indicating at least congeneric relationships with *gagatina*.

Chaetopalpus acroterius Philip, new species

A small, black species with contrasting, bright yellow appendages (hence the name from "acroteria," the extremities of the body) and yellow baso-costal areas of the otherwise fumose wings.

Holotype female, 10 mm. Eyes plainly hirsute with rather short yellow hairs; pattern (relaxed) unbanded. Front with sides plainly convergent above, index of basal width to maximum height, 1:1.9, shining black with inconspicuous black hairs, smooth in the upper half, finely, transversely wrinkled below with a bulge in the middle but no defined callosity; three ocelli on a prominent, raised tubercle at the vertex. Subcallus very small and narrow, the upper margin shining brown, the lower margin a narrow band of yellow pollen just above the antennae. Face and cheeks pale brown pollinose with black hairs, separated by unusually deep, apodemal furrows on each side. Antennae with two basal segments dull yellow with coarse, sparse black hairs, the pedicel half as long as the scape, neither produced above, the third segment bright yellow, the plate nearly as tall as the scape, and tapering to meet the annuli more gradually than the abrupt juncture between disclike plate and annuli seen in *C. coracinnus*, while the terminal segment is more pointed than in the latter; the plate has suggestions of transverse sutures but these are not plain like those dividing the terminal four annulations, or as seen in the flagellum of *Protodasyapha hirsutuosa* (Philippi). Palpi and proboscis black, about equal in length, and hardly longer than the front, densely black haired, the first segment bulbous subshiny, the second segment cylindrical, gently curved and tapered to a blunt point without evident sensorial pits. There is a wide, gray pollinose post-ocular rim on the head with brown and some yellow hairs on the hind margin. *Thorax* entirely, coxae and femora dull blackish brown, with sparse black pile, longer below. All tibiae, tarsi, and halteres contrasting bright yellow with concolorous hairs on the legs, no definite hind tibial fringe. Wings smoky, the stigma, costal cell, and first M cell basad of the two basal cells plainly yellow. Cell R_5 wide open, short spur-veins present. Subepaulets reduced to small, bare scales, and the tegulae smaller than usual. *Abdomen* subshining blackish brown, with sparse inconspicuous brown and black hairs.

Holotype locality: VALPARAISO, CHILE, November, 1900. P. Herbst.

It is difficult to decide for generic placement if the flagellum of the antennae has pseudoannulations in the basal plate or if there are actually more than five segments. Some head characters suggest relationship to Nearctic *Apatolestes comastes* Williston, and *Brennania hera* (Osten Sacken) but these Nearctic species have sensorial grooves or pits on the edges of the palpi, and lack the deep apodemal grooves on the sides of the face, plus better

developed subcalluses and less differentiated but plainer basal annulations in the antennal flagellum.

Chaetopalpus abaureus* Philip, new species

A small, dark brown, predominantly golden-haired species with long and slender palpi.

Holotype male, 9 mm. Eyes densely yellowish-brown haired, the upper facets but little enlarged. Ocellar tubercle dark brown with three ocelli and long brown hairs, raised above the upper eye level. Frontal triangle small, brown with a strong median sulcus. Fronto-clypeus depressed giving the cheeks on either side a swollen appearance, the whole brown and covered with long, dense golden and brown pile. Beard golden yellow. Scape and pedicel reddish brown with bushy black hairs, the former a little longer than tall; flagellums missing. Proboscis very short, the golden-haired palpi reaching to its tip. Apical, palpal segment dull orange, slender and tapering downward to a blunt point, a little over three times as long as basal thickness; basal segment brown and swollen. *Thorax* and dorsum of the abdomen deep chocolate brown entirely covered with long golden yellow pile (viewed from the side), lighter under the wing bases. Coxae, fore femora on the basal two-thirds, and fore tarsi brown, remainder of legs bright reddish; hairs predominantly yellow basally with brown ones intermixed on the tibiae, and predominating in the hind-tibial fringe. Wings smoky with clouds intensified on the basal cross-veins; cell R_5 open, spur-veins present. Halteres brown with yellow seams. Subepaulets bare. Dorsum of abdomen blackish, extreme lateral margins of tergites 2 to 4 and the incisures of 2 and 3, as well as the entire venter orange-red with dark shadows on sternites 1, 2, and 7. Pile on entire abdomen long and golden yellow.

Holotype locality: "15 MILES SOUTH OF LOS VILOS, COQUIMBO, CHILE, 13 December, 1950, Ross and Michelbacher."

C. mendozanus Enderlein from Argentina, as discussed and figured by Kröber (1930a), appears to be closest but differs in having short chunky palpi with black hair, the pale vestiture whitish gray on thorax and abdomen blackish rather than golden, the halteres bright ocher yellow. The two may turn out to be color phases of the same species but the palpal shapes are quite different, at least in the males.

Fidena nitida Philip, new species

A compact medium-sized, polished black species of the *nitens* group with shining black snout, black appendages, the tibiae contrasting bright yellow, white beard and wings sharply darkened basad of the outer tips of the basal cells.

Holotype female, 16 mm. Eyes densely covered with short brown hair.

* Latin, from golden (quality), in reference to the over-all golden yellow color of the vestiture.

Front blackish with black hairs, sides parallel, index 1:3, the three ocelli on a prominence at vertex. Subcallus narrow, thinly dusted with black pollen; snout piceous, shining, subequal to front in length. Beard dense, snow white. Antennae and palpi black, slender, the former considerably longer than the snout, the palpi a little less than one-quarter the length of the proboscis; the last is elongate, subequal in length to the head and thorax combined, excluding the snout. *Thorax* and scutellum blackish, with some dark brown shading, entirely black haired except for two narrow white lines above the wing bases. Pleura, chest, coxae, femora, and their vestiture, coal black. Tibiae, tarsi, and their hairs contrasting bright yellow. Wings pale yellow, the basal cells sharply dark brown. Halteres black, subepaulets bare. *Abdomen* broad, compact, enameled black in appearance with short black hairs, small white patches of hairs on the outer corners of tergites 2 and 5, and of sternites 2, 3, 4, and 5. Hairs of middorsum entirely black.

Holotype locality: "PERU: MONSON VALLEY, TINGO MARIA, 21–X–1954. Schlinger and Ross."

The coal-black antennae and palpi, and narrower front will separate this from *F. eriomeroides* Lutz, and the bicolored legs and absence of median, white-tufted triangles on the last few abdominal segments from *F. nitens* Bigot, both of Brazil.

FIDENA ALBIFRONS (Macquart)

Originally described in *Pangonia, sens. lat.*, the species has been variously transferred to *Lilaea, Listraphapha* and finally *Lilaeina*, which Mackerras (1955) places with question as a synonym of *Fidena*. Though females are well-known from several localities, the first male, which is described below was taken by the Ross Expedition at Zapallar, Aconcagua Province, Chile, 27 November, 1950.

Allotype male, 14 mm. Differs from the female in the usual sexual characters and is readily associated. Upper eye facets enlarged about twice the size of the lower ones, the area merging gradually with the lower area, densely pale brown hirsute. Ocellar tubercle prominent and situated well above the upper eye level; adorned with a patch of coarse decurved, black bristles. Fronto-clypeus more truncated at the insertion of the proboscis than in the female and the scape and pedicel darker, almost black; flagellum black. Palpi very short, barely reaching the base of the proboscis, the apical segment ovoid, shorter than the basal, covered with coarse black hairs. Proboscis but little longer than the height of the head. Beard pale yellow. Thorax more hirsute than in the female, the dorsal lines as plain. Legs unicolorous blackish-brown. Wings hyaline, with cell R_5 closed at the margin in both wings. No spur-veins.

The writer compared several females provided by L. L. Pechuman with the type of *albifrons* in Paris in 1953. The type agrees with variants of this species having closed cell R_5, basal

annulus of the flagellum longer than usual, moderately long palpi, yellow beard and body hairs, and reddish femora. It bears the label "Chile, Gay" and is intact except for a missing wing and antenna. There is unusual variation in some characters among females as noted by others, and Kröber (1930a) appears correct in considering as a synonym, *Pangonia subandina* Philippi, which the describer had differentiated only by the open cell R_5. This cell in series shows all intergradation from open and but little narrowed to closed and petiolate. Two specimens taken at the same time showed the closed condition in one, and in the other these cells are just closed at the margin in one wing and narrowly open in the other. There is a short spur-vein in one wing of each of two other specimens. The antennae and palpi may be brown or black. The latter are especially variable in shape showing graduations from short, blunt and very broad to narrow, and attenuated to a point at nearly one-third the length of the proboscis. The legs may be blackish, reddish, or bicolored with only the femora dark. These variations are not in constant combinations in series or specimens so as to suggest confusion of more than one species of the practicality of varietal establishment.

Scione acer* Philip, new species

(= *S. incompleta* Kröber, 1930c, *nec* Macquart, 1845)

A dark species with blackish, pale margined notum, basally reddish abdomen, partially bicolored legs, and wings heavily fumose in the basal half.

Holotype female, 11 mm. Eyes with thick, blackish brown hair. Front convergent above, index 1:2.8, vertex black with three ocelli and with two marginal spots of pale brown pollen on either side of the median ocellus, a large median patch of blackish pollen, and below it to the subcallus, a narrower band of yellowish brown pollen, the whole covered with heavy black hairs. Subcallus dark brown, a paler spot on either side of the antennal fossae. Fronto-clypeus only moderately produced, length about equal to the height of the front, brown pollinose and pilose. Cheeks gray with a dense, white beard. Antennae brownish black with long black hairs on the two basal segments. Apical palpal segment reddish brown, rather short and broad, ratio of width to length as 1:2.7, attenuated to a point at little less than one-fourth the length of the proboscis. The latter is relatively short, a little less than the height of the head. *Thorax* including antealar tubercles and scutellum blackish, the usual anterior, two pale lines narrow and not extended beyond the sutures; covered with black hairs, a small patch of pale yellow ones on either shoulder, and a line of the same color from

* Latin, sharp or piercing.

above the wing bases to the outer corners of the scutellum. Pleura and chest dark brown with concolorous hairs and pale yellow tufts beneath the bases of the wings. Coxae and femora blackish with long, concolorous hairs, longest on the fore coxae; tibiae dark reddish brown with short, black hairs, no fringe on the hind pair which are almost as dark as the femora. Wings tinted on the outer halves with clouds on the cross-veins, more heavily fumose inward of both the stigma and cross-veins at the tips of the two basal cells; cells R_5 and M_3 closed and petiolate, vein M_2 weakened toward the margin in only one wing. "Knots" but no spur-veins are present. Subepaulets dark brown, bare. Halteres brown. *Abdomen* of the usual compact shape, reddish brown on the basal three segments, darkening caudad, mostly blackish haired, with pale yellow hairs over the entire venter, on the outer corners of the tergites, and forming an easily-rubbed dorso-median row of small, pale triangles.

Holotype locality: "DEPT. HUANURO, HCDA. EXITO, PERU, alt. 1150 m., IX–1936. Mrs. Y. Mexia, Collector." Van Dyke Collection.

Since *Pangonia incompleta* Macquart is the genotype of *Scione*, it is unfortunate that the type female (seen by the writer in Paris in 1953) was not studied by either Ricardo (1902) or Kröber (1930c), when each reviewed the species. A tendency in species of this group for vein M_2 (from the discal cell) adventitiously to fade before reaching the wing margin was the basis for Macquart's name.

The type female from "Colombie" also bears a MS label "fascipennis" and is intact except that the hairs of the beard and chest appear to have been eaten off by book lice. It is in almost exact agreement with a female I have from Bogota, Colombia. Compared to Kröber's description, *S. incompleta* female is a redder species including the entire antennae and legs, the palpi are brown and narrower, the front is wider below and more convergent above (index 1:1.19), the snout is a little longer than the height of the front, and the proboscis more than a third longer than the head, lines on the brown thorax are evident, the abdomen does not darken as much caudally and there are more yellow hairs on the thorax and abdomen. The wings are less strongly tinted basally and have stronger costal shadows beyond the stigma. It is evident that Kröber described the female of the present new species rather than the true *S. incompleta*.

As Schiner (1868) and Ricardo (1902) have pointed out, however, there is the further complication in assignment of the name that Macquart's original description was based more on a (now missing) very dark cotype male. The type male may eventu-

ally be found, but it is not likely to be the male of *S. acer* n.sp. since the abdomen is described as blackish without mention of lateral red.

Scione distincta (Schiner), from Colombia, is also a dark species with bicolored legs, but like *S. albifasciata* (Macquart) and *S. maculipennis* (Macquart), *S. distincta* has a more plainly lined thorax, and longer snout and palpi than *S. acer*. The types of all three of the foregoing species were seen by the writer in 1953.

Tabanus (Macrocormus) rubricauda* Philip, new species

A medium-sized, slender, reddish species with tinted wings, long spur-veins, and abdomen with median pale triangles inconspicuous or absent.

Holotype female, 12 mm. Eyes bare, unbanded (relaxed). Front narrow, slightly convergent below (index 1:5.7), dark yellow pollinose, a small blackish spot at vertex with a vestigial, median ocellus, the brown, basal callosity triangular and plainly separated from the ocular margins, prolonged above without sudden constriction into a narrowing dark brown, attenuated keel which reaches to the upper third of the front. Subcallus reddish, with yellow pollinosity. Fronto-clypeus grayish-yellow pollinose with sparse yellow hairs. Cheeks yellow pollinose with a short, pale yellow beard. Scape and pedicel red with short black hairs; flagellums missing (however, a broken one adherent to the body could well belong since it has somewhat the shape and color of related *T. sorbillans;* it has red plate and darker annuli, the two portions subequal in length, and the plate compact, subequal in width, and gently excavated, the tooth low but acute). Palpi deep yellow, long, slender, crescentic and blunt, covered with short black hairs. Proboscis fleshy, less than a fourth longer than the palpi. *Notum* and scutellum dark brownish black, unlined but with black and appressed yellow hairs. Pleura reddish with darker shadows, yellow pile predominating. Fore coxae grayish black with pale hairs; fore-femora blackish with concolorous hairs, the two hind pairs predominantly reddish with mostly yellow hairs and some dark brown ones basally; tibiae reddish, the fore pair brown on the apical half, hind-tibial fringe and most of the other hairs black. Wings distinctly tinted, deeper yellow in the costal cells and margining the outer radial and cross-veins; spur-veins about equal to stems, cells R_5 wide open. Subepaulets hairy. Halteres reddish. *Abdomen* dull reddish darkening caudad with red incisures, predominantly black-haired dorsally, entirely yellow-haired ventrally; the only evidence of small triangles (because of wear) is a small gray pollinose spot on the posterior margin of tergite 2 and a few yellow hairs on the median, hind margins of 5 and 6.

Holotype locality: "DEPT. HUANURO, HCDA. EXITO, PERU, alt. 1150 m., IX–1936. Mrs. Y. Mexia, Collector." Van Dyke Collection.

* Latin, red tail.

Paratype female, same data, in the collection of the author, is in close agreement but a little more worn, and the notum appears blacker. There is only a small black spot and no vestigial ocellus at the vertex, and again no evidence of original, abdominal triangles though scattering black hairs remain on tergites 3 and those following.

The species, though smaller and without abdominal triangles, is obviously related to *T. sorbillans* Wiedemann, the type of the subgenus *Macrocormus*. Other differences are the gradually tapered frontal keel, the darker notum and fore legs, black hind-tibial fringes, and (if correctly associated) more compact antennal plates. The darker fore legs, notum and scutellum, and tapered frontal keel also appear to separate this species from other related species in the subgenus.

TABANUS (TAENIOTABANUS) CARNEUS Bellardi

Three females taken by Ross and Michelbacher at "Puna I.," Ecuador, 6 May, 1951, show variation in abdominal pattern that deserves mention. Otherwise all three agree in structure, size, red coxae, femora and scutellums, dark, median, integumental spot on tergite 2, and frontal index of 1:4. Fairchild's figs. 24 and 25 (1942a) would illustrate the fronts of these. The eye patterns of all three (relaxed) lack the usual heavy, purple, upper band. One has the usual three broad, even, yellow longitudinal stripes on the abdomen, though the median one is more constricted on on tergite 2, and frontal index of 1:4. Fairchild's figs. 24 and specimens have patterns that, unaccompanied by the preceding female, would be difficult to associate here. The median lines are not as contrasting and are narrower, consisting of rows of truncated, connected triangles, a little widened on the hind tergal margins; the stripe would be even less distinct if the pale overlying hairs were worn off. The sublateral yellow lines also are not as distinct as in the first specimen and are composed of series of elongate, though mostly connected and even dashes. Other species with this type of median stripe such as *T. maya* Bequaert, differ in having more jagged sublateral lines and/or narrower fronts, or darkened legs basally and black scutellums.

T. subsimilis Bellardi from Mexico is a previously unidentified form of *lineola* of which the writer studied the type in Turin, Italy, in 1953. It is worn dorsally but intact and resembles the above two Ecuador variants in head characters, red-tipped scutel-

lum and median stripe, but the lateral stripes are jagged and the coxae and varying portions of the femora are blackish gray in the type. The writer has a Michoacán, Mex., female in close agreement with the type for comparison with the Ecuador *carneus*.

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Addendum: While this report was in press, study of the supposedly, long-lost type of *Agelanius meridianus* Rondani located in Naples, Italy, has revealed this to be unquestionably congeneric with *Chaetopalpus annulicornis* Philippi as discussed in a paper now in preparation. Recent information also affects the status of the subgenus *Veprius* mentioned in text.—C. B. P.